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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,902	09/28/2000	Barrie Gilbert	1482-129	8966

7590 05/21/2003
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EXAMINER

NGUYEN, TUNG X

ART UNIT PAPER NUMBER

2829

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,902

Examiner

Tung X Nguyen

Applicant(s)

GILBERT, BARRIE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

- A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2003.
- 2a) ☒ This action is **FINAL**.
- 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 6-9, 11, 13-18, 21, 24-27 and 29 is/are allowed.
- 6) ☒ Claim(s) 2, 3, 5, 10, 12, 19, 20, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/26/03 have been fully considered with the following effect.

Regarding to claims 2, 10, 19, 22, the applicant argues that Yamashita only discloses log amps that are operational amplifiers configured with feedback diodes for logarithmic operation. However, the newly added limitation **"wherein the first and second log amps are progressive compression log amps"** does not disclose in the specification, such as **"progressive compression log amps"**. Therefore, this action is made final.

Claims 4, 14-15, 25-27, 29 are allowed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2, 10, 19, 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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In the instant application, the claimed **"the first and second log amps are progressive compression log amps"** recited in claims 2, 10, 19, 22, are not clear supported elsewhere in the specification. Correction to the claims is requested.

4. Claims 2, 10, 19, 22, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. See the explanation above.

To apply art, the examiner assumes that the first and second progressive compressive log amps are the same with the first and second log amps.

5. Claims 2, 10, 19, 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "the first and second log amps are progressive compression log amps" recited in the claims 2, 10, 19, 22 lacks a clear support teaching in the specification.

The dependent claims 3, 5, 12, 20, 23 are rejected base on the rejected independent claims.

To apply art, the examiner assumes that the first and second progressive compressive log amps are the same with the first and second log amps.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 2, 3, 5, 22-23, are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita et al. (u.s.p 4,906,836).

As to claims 2, 3, 5, 22, 23 Yamashita et al. disclose in Fig. 1, a measurement system comprising: a first log amp (LOG1) having a current output (inherent); a second log amp (LOG2) having a current output (inherent); and coupling to a differencing circuit (AMP1), wherein the differencing circuit is arranged to continuously process output from the first (LOG1) and second (LOG2) log amps; and the differencing circuit (AMP1) having a summing node (at the negative node and the positive node of AMP1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10, 12, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al. (u.s.p 4,906,836).

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As to claims 10, 12, 19, 20, Yamashita et al. disclose in Fig. 1, the system comprising: a first log amp (LOG 1), and the second log amp (LOG 2); and wherein the first and second log amps are co-integrated on a substrate in a package. For example, (see the abstract) mentions that "An integrated circuit includes an operational amplifier...the output of the second logarithmic amplifier is connected to the inverting input terminal of the operational amplifier", thus obviously suggesting the first and second log amps are co-integrated on the semiconductor. In regard to claimed "co-integrated on the substrate" it is note that the reference is silent such feature; However, It would have been obvious to a person having ordinary skill in the art at the time the invention that any conventional semiconductor structure could have an co-integrated on the substrate implemented as an inherent design variations, as also well-known in the existing semiconductor technology.

Allowable Subject Matter

10. Claims 4, 6-9, 11, 13-18, 21, 24-27, 29 are allowed.

11. Claim 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 4, 6-9, 16-18, 24, 29, the prior art does not suggest or teaching a first and second log amp having a first limiting, a second limiting output respectively coupling to

the input of the phase detector; and phase detector comprising a multiplier; However, the first and second log amps coupled to the first and second input of differencing circuit wherein the differencing circuit consist essentially of a summing node; in combination with the other claimed elements.

Claims 11, 13-15, 21, 25-27, the prior art does not disclose: a) a first and second log amps are co-integrated on a substrate and wherein the first and second log amps are arranged symmetrically about a center line; b) a first parasitic network and second parasitic network coupling to the first and second log amp respectively, and wherein the first and second parasitic networks have similar frequency responses; in combination with the other claimed elements; c) the difference circuit having more than three input and the first, second and third log amps coupling at that three input of the difference circuit; d) the differential circuit processing the first and second output signals, and utilizing a signal to be examined as the first input signal; and utilizing a reference signal as the second input signal; in combination with the other claimed features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X Nguyen whose telephone number is (703) 305-3337. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703)-308-1233. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5841 for regular communications and (703) 308-5841 for After Final communications.

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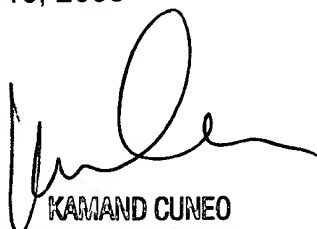
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TN

May 16, 2003



KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
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